Biology in pictures

Silken skein

A skein of silk (purple) emerging from the anterior spinneret of a Spiny back spider (*Castercantha sp.*).

The spider has been stimulated to secrete silk from its piriform gland spigots (orange and yellow). In the Spiny back spider, the orientation of the spigots is critical to the organization of the narrow-gauge secreted strands that are fused together to form the final silk strand. The scanning electron micrograph has been colored to emphasize morphological features.

For more details, see Thiel *et al.*, *Biopolymers* 1994, **34:**1089–1097. (Image provided by Dennis Kunkel, Pacific Biomedical Research Center, University of Hawaii at Manoa, Honolulu, Hawaii 96822, USA.)

Review

A lust for science
Peter Goodfellow

The unlikely hero of *Mendel's Dwarf*, Benedict (Ben) Lambert, will be familiar to many readers. Many of us have worked with scientists like Ben, have heard them lecture and read their work. But even if you can relate to Ben as a character, Simon Mawer's revelations about the man behind the science will probably come as something of a shock. Ben is obsessed with science, sex, Mendel and Mrs Jean Miller.

Ben Lambert's research group is responsible for showing that *FGF3* is mutated in achondroplasia, the most common form of dwarfism. Ben himself is an achondroplastic dwarf (giving news headline writers the opportunity for such gems as: "Dwarf biologist discovers himself"). He is also featured in a television documentary that seeks to show the world, scientific and non-scientific, through Ben's eyes.

Peer recognition follows and he is invited to give a keynote lecture at the Mendel Symposium in Brno. For Ben, this is both a spiritual and family homecoming as he is a great-great-great nephew of Mendel. As you might imagine him boasting after a few beers, Ben shares 3% of his genes with a genius. An added bonus in the novel is a synopsis of the Mendel Lecture in which Ben castigates the eugenics trends that often stalk advances in genetics.

Ben is a scientist, Ben is a geneticist, Ben is a dwarf but, ultimately, Ben is a man. Some will find Mawer's book distasteful because of its focus on sex. Men have a Y chromosome which encodes the *SRY* gene that induces testicular development, and testes produce testosterone. I recall a parents' evening at my son's primary school. One parent demanded that the school

not mention masturbation in sex education classes. The Chairman of the Governors, a local priest, replied that 99% of men masturbated and that he had no idea what the other 1% did.

Ben Lambert is a fervid member of the 99% club and early chapters of *Mendel's Dwarf* are reminiscent of *Portnoy's Complaint*. The later chapters chronicle Ben's attachment to, and love affair with, Mrs Jean Miller. We learn of the growing bond between them, the consummation of their affair and the final Faustian agreement by which Mrs Miller consents to one final sexual act in return for impregnation with an egg fertilised by Ben's sperm but guaranteed free of mutation in the *FGF3* gene. Inevitably, tragedy follows.

Does it help to portray scientists in the grip of lust? I am not sure. For my tastes, the novel takes on too many themes: the whole of genetics, the sex lives of both Mendel and Ben, the bitterness of the phenotypically unusual, eugenics and the attractions of Mrs Miller. Each is worth a book in itself.

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Mendel's Dwarf by Simon Mawer is published by Doubleday, London. Hardback (ISBN 038 540 8978) priced at £15.99; paperback (ISBN 186 230 0054) due out 2 April 1998.

Gazetteer

SmithKline Beecham

What is it famous for? At the moment, failing to merge with Glaxo Wellcome. These two giants of the British pharmaceutical industry recently caused havoc on the stock markets by announcing a hastily formed merger agreement that just as rapidly fell apart. This mother of all mergers would have created the world's third largest company, with a market value of £100 billion, and the biggest drug company by far with 8% of the world market, way ahead of the nearest rivals, Merck and Novartis.

But wasn't SmithKline merging with AHP? Secret merger talks with AHP (American Home Products) started last November. But no sooner was a deal announced in January than SmithKline got a better offer from Glaxo Wellcome and pulled the plug on AHP.

So is SmithKline an attractive partner? SmithKline has two drugs that each make more than a billion dollars a year: the anti-depressant Seroxat (the main rival to Prozac) and the antibiotic Augmentin. Other products include an arthritis drug, Relifex, and a successful range of vaccines but much of its revenue in fact comes from an enormous range of consumer brands and over-the-counter remedies. It was expected that merger with Glaxo Wellcome would have meant abandoning some of SmithKline's best-selling drugs to avoid a regulatory enquiry, such as the anti-herpes drug Famvir and the anti-nausea drug Kytril.

What about basic research? The company opened a state-of-the-art research facility a year ago in Harlow, UK at a cost of £250 million. It has invested heavily in genetic research, especially in gene identification technology, defining hundreds of pharmaceutical development targets. But that's an expensive business. One of the much-touted benefits of the merger with Glaxo Wellcome was the huge Research and Development organization it would have created — with a budget of £1.9 billion, twice that of the nearest rival.

What's it like to work there? Since SmithKline Beecham was created from SmithKline Beckman (US) and the UK's Beecham Group in 1989, it has been far more an American company than anything else. Anyone used to an academic environment might find the prevailing smart dress code and nine-to-five mentality somewhat strange, but it's rumoured that at least the Research and Development Division — of which eccentric former Cambridge Genetics Professor Peter Goodfellow is Vice-President — still manages to retain an unorthodox atmosphere more condusive to research.

Why did the Glaxo Wellcome merger collapse? The deal is thought to have foundered because of a clash of management egos. Certainly, both SmithKline's Chief Executive Jan Leschly — a go-getting Dane and former world-class tennis player — and Glaxo's Executive Chairman Richard Sykes are powerful personalities. The break-up is particularly embarrassing for SmithKline. As one city fund manager said: "SmithKline has already jilted the bride to run off with the best man. Now they cannot even get it together with the best man."

So is it a case of 'divided we fall'? There is speculation that SmithKline has made itself a target for an aggressive takeover. The company will certainly have its work cut out to restore its credibility. Both Augmentin and Seroxat face challenges to patent protection and may soon have generic competition. SmithKline needs to prove it can produce major new drugs to replace them.